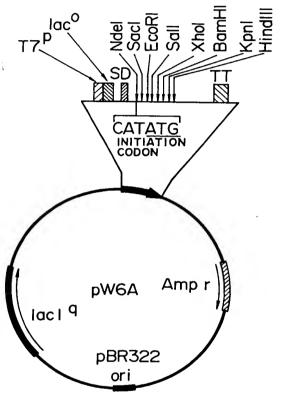
# F I G. I DETAILED DIAGRAM OF EXPRESSION VECTOR PW6A

MULTICLONING SITES



T7<sup>p</sup> : T7 promoter

lac OPERATER

SD : SHINE-DALGARNO SEQUENCE

TT : T7 TRANSCRIPTIONAL TERMINATOR

Amp r : β LACTAMASE lac I q : lac REPRESSOR

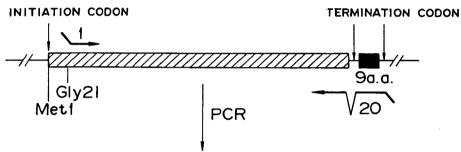
lac | q | lac REPRESSOR

pBR322 REPLICATION ORIGIN

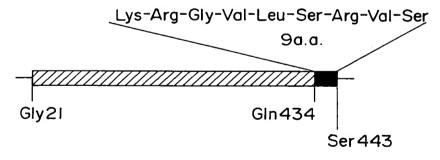


# F I G. 2 PREPARATION OF GENE ENCODING 47K ANTIGEN

#### GENE ENCODING 47K ANTIGEN ON GENOMIC DNA



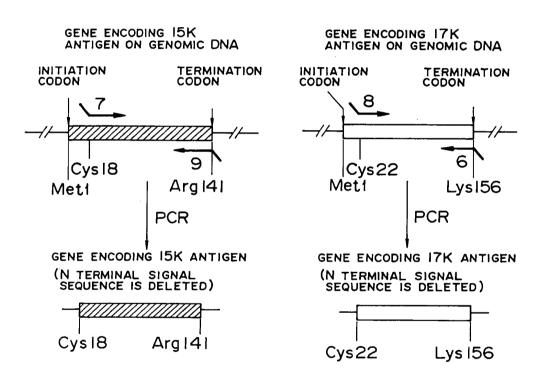
GENE ENCODING 47K ANTIGEN WITH C TERMINAL EXTRA SEQUENCE (N TERMINAL SIGNAL SEQUENCE IS DELETED)



PRIMER



# F I G. 3 PREPARATION OF GENE ENCODING 15K ANTIGEN AND 17K ANTIGEN

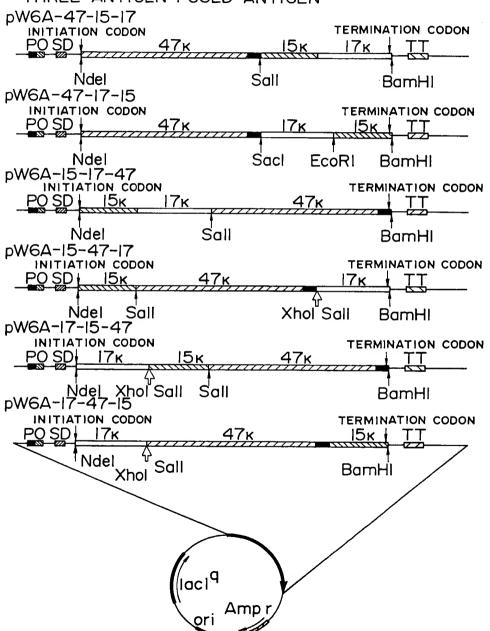


PRIMER

FIG. 4 DETAILED DIAGRAM OF EXPRESSION VECTOR FOR TWO-ANTIGEN FUSED ANTIGEN INITIATION CODON TERMINATION pW6A-15-17 CODON PO SD TΤ 17ĸ Ndel BamHi pW6A-15-47 INITIATION TERMINATION CODON Ndel Sall BamHI pW6A-47-17 INITIATION COPON TERMINATION CODON PO SD 7κ Ndel Sall BamHI pW6A-47-15 TERMINATION CODON INITIATION CODON Sall Ndel BamHl TERMINATION CODON INITIATION pW6A-17-15 Ndel Xhol Sall BamHI pW6A-17-47 INITIATION CODON TERMINATION CODON PO SD I 17<sub>K</sub> Ndel <sub>Xhol</sub> Sall BamHI

F I G. 5

DETAILED DIAGRAM OF EXPRESSION VECTOR FOR THREE-ANTIGEN FUSED ANTIGEN

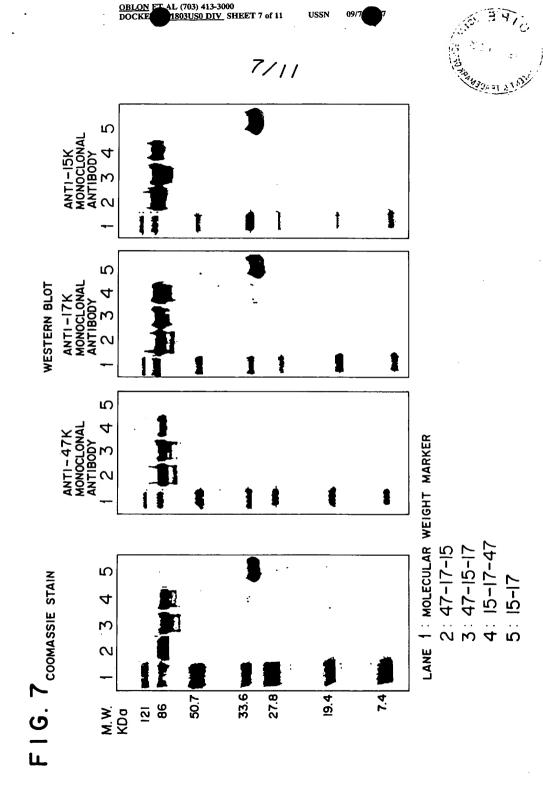


USSN 09/

6/11

### FIG. 6

pW6A-15 INITIATION **TERMINATION** CODON CODON POSD Ndel **BamHI** pW6A-15-15 INITIATION **TERMINATION** CODON CODON 15ĸ Ndel Sall BamHI pW6A-15-15-15 INITIATION TERMINATION CODON CODON POSD 15<sub>K</sub> 15ĸ TTSall BamHl Ndel pW6A-15-15-15-15 INITIATION **TERMINATION** CODON CODON 15<sub>K</sub> Ndel Sall BamHI KpnI HindIII

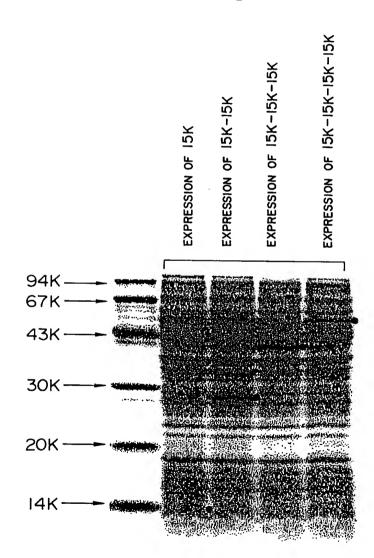








# FIG. 8



*9/11* FIG. 9

ř ا	EXPRESSION OF 15K-15K	EXPRESSION OF 15K-15K	EXPRESSION OF 15K-15K-15K
NOIS	NOIS	NOI	NOI
EXPRESSION OF 15K	EXPRESS	EXPRESS	EXPRESS

123K -

85K -50K -

33K

29K -

19K -

8K

USSN



# 10/11

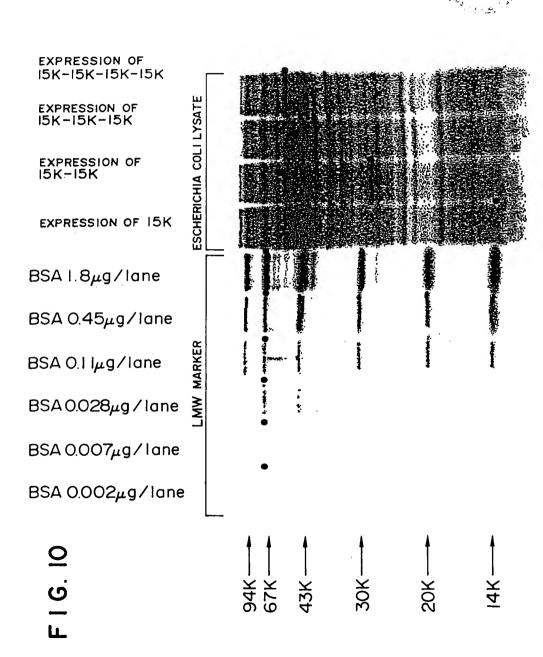


FIG. II

